

I claim

subA'7

1. A method of calibrating an electrical circuit for sensing a temperature, said method comprising the steps of:
  - a. providing a temperature sensor,
  - b. providing an electrical circuit adapted to receive a signal from the thermistor and to produce an output signal indicative of the sensed temperature of the thermistor,
  - c. inputting at least two known electrical voltages to the circuit,
  - d. analyzing the output signals representative of the output from each of the at least two input voltage signals,
  - e. using a set of equations equal to the number of the at least two input voltage signals to determine the constants in the equations, and
  - f. using the determined constants to calibrate the electrical circuit.
2. A method as defined in claim 1 wherein said step of providing a temperature sensor comprises providing a thermistor.
3. A method as defined in claim 2 wherein said step of using a set of equations comprises using two equations, each corresponding to one of said input voltages.
4. A method as defined in claim 1 wherein said step of providing an electrical circuit includes providing an electrical circuit having a voltage divider.
5. A method as defined in claim 1 wherein said step of providing an electrical circuit includes providing an electrical circuit having an analog to digital converter and wherein said output signal is in digital form.
6. A method as defined in claim 1 wherein said step of using a set of equations comprises using the equation  $V_o = mV_i + b$  and solving for the constants  $m$  and  $b$ .

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7. An infant apparatus for providing heat to an infant, said infant apparatus comprising:

a base for supporting an infant, a heater mounted with respect to said base and adapted to direct infrared energy toward an infant supported on said base, a temperature sensor adapted to be affixed to an infant to sense the temperature of an infant and a temperature display adapted to read out the temperature sensed by said temperature sensor, said infant apparatus further having an automatic calibration system comprising;

an electrical circuit adapted to receive the signal from the temperature sensor and to provide a output signal to said temperature display to display the temperature of said temperature sensor,

means to input at least two known voltage signals to said electrical circuit,

means to determine the output signal from said electrical circuit when each of said at least two voltage signals are inputted to said electrical circuit,

means to calculate the offset and span constants for said electrical circuit by using said outputs from said electrical circuit and said input voltages corresponding thereto, and

using said calculated constants to calibrate said electrical circuit.

8. An infant warmer for providing heat to an infant as defined in claim 7 wherein said means to calculate the offset and span constants comprises a microprocessor.

9. An infant warmer for providing heat to an infant as defined in claim 7 wherein said temperature sensor is a thermistor.

10. An infant apparatus for providing heat to an infant as defined in claim 7 wherein said electrical circuit includes an analog to digital converter to provide said output signal in digital form.

11. An infant apparatus for providing heat to an infant as defined in claim 10 wherein said means to calculate the span and offset constants for the electrical

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circuit comprises a means to input said input voltage and said output signal into the equation  $V_o = mV_i + b$  for each of said at least two input voltage signals.

12. An infant apparatus for providing heat to an infant as defined in claim 7 where in said infant apparatus is an infant warmer.

13. A method of calibrating an electrical circuit, said method comprising the steps of:

- a. providing an electrical component producing a signal representative of a sensed parameter,
- b. providing an electrical circuit adapted to receive a signal from the electrical component and to produce an output signal indicative of the sensed parameter,
- c. inputting at least two known electrical voltages to the circuit,
- d. analyzing the output signals representative of the output from each of the at least two input voltage signals,
- e. using a set of equations equal to the number of the at least two input voltage signals to determine the constants in the equations, and
- f. using the determined constants to calibrate the electrical circuit.

14. A method of calibrating an electrical circuit as defined in claim 13 where said step of inputting at least two known electrical voltages comprises inputting two voltages and said step of using a set of equations comprises using two equations having two unknowns.

15. A method of calibrating an electrical circuit as defined in claim 14 wherein said two unknowns are the span and offset constants for said circuit.

16. A method of calibrating an electrical circuit as defined in claim 15 wherein said sensed parameter is temperature.